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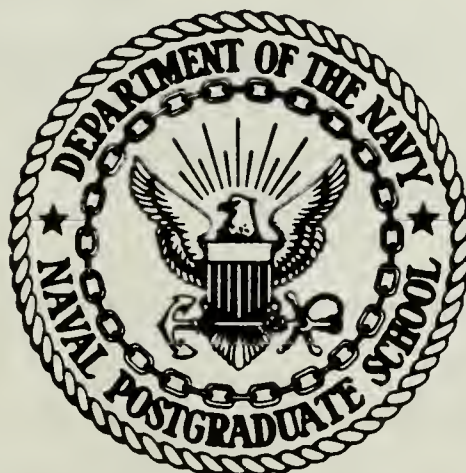
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THESIS

ANALYSIS OF
RECEIPT TAKE-UP TIMES
FOR NAVY SHIPS

by

Dwight S. Weirich

December 1987

Thesis Advisor:

Fenn C. Horton

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Analysis Of
Receipt Take-Up Times
For Navy Ships

by

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Lieutenant. Supply Corps. United States Navy
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Submitted in partial fulfillment of the
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ABSTRACT

The purpose of this thesis is to determine if Navy Ships are processing materiel receipts in accordance with the Uniform Material Movement and Issue Priority System. Capable of isolating weaknesses within the Supply and Logistics Support Systems, it discusses the various segments of the requisition cycle and how these segments are utilized. Finally, it analyzes the Receipt Take-Up Time portion of the requisition cycle for Navy Ships utilizing the Navy's Requisition Response Time Management Information System.

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I. INTRODUCTION

A. GENERAL

Quick response to demands placed against our Supply and Logistics Support Systems play an essential role in maintaining our military forces in a high state of operational readiness. Each demand is identified by a requisition generated by the end-use activity. In an effort to satisfy these demands, each requisition must pass through various segments of the support systems. With the use of today's technology, the complete history or life cycle of a requisition can be documented. This enables appropriate managers to monitor and isolate any weaknesses which may exist in their areas of responsibility. Once a deficiency is identified corrective action can be administered.

In 1962, the Department of Defense (DoD) implemented the Uniform Material Movement and Issue Priority System (UMMIPS) which provides a standard response time table. This table represents a means for measuring the effectiveness of our Military Supply and Logistics Support Systems. A response time standard is assigned to each segment for which the requisition must pass. Each military service is responsible for ensuring that the activities under their command are actively pursuing such standards.

One of the Navy's answers to the UMMIPS is the Requisition Response Time Management Information System (RRTMIS). The purpose of RRTMIS is to measure the material requisition response time for Navy

ships. The RTTMIS is also broken down into various requisition phases, which can be compared to the UMMIPS time standards to evaluate the support systems effectiveness.

This thesis will only be concerned with the Receipt Take-Up Time (RTUT) portion of the requisition cycle.

B. PURPOSE

The purpose of this thesis is to determine if navy ships are efficiently processing material receipts. Specifically, the following research questions are proposed:

1. Do Navy afloat units adhere to the time standards for the RTUT segment of the DoD's UMMIPS?
2. If Navy afloat units do not meet the UMMIPS time standards for the RTUT segment, should the overall UMMIPS standards be changed?
3. Is the RRTMIS a reliable measure of effectiveness for the RTUT segment?
4. How can the RTUT for afloat units be improved?

C. SCOPE

This thesis will be limited to the examination of the RTUT portion of the RRTMIS program for Navy afloat units. An analysis will be conducted on the Receipt Take-Up Times for all Shipboard Uniform Automated Data Processing System (SUADPS) reporting activities as a whole. Receipt Take-Up Times and specific receipt procedural problems for individual ships will not be addressed. All conclusions and recommendations will be based strictly from the analysis performed.

D. ASSUMPTIONS

The RRTMIS only utilizes data obtained from afloat units and Marine Air Groups which are SUADPS capable. This thesis is limited to Navy afloat units which comprise a mere fraction of the navy's total ship population. Therefore, when making conclusions and recommendations, it will be assumed that these SUADPS reporting activities are a fair representation for all Navy afloat units.

E. METHODOLOGY

Information and data utilized in this thesis were gathered from various sources. Receipt Take-Up Time data was obtained from the Fleet Material Support Office (FMSO) located in Mechanicsburg, Pennsylvania. Personal interviews were conducted by telephone with specialists from both the Naval Supply Systems Command and FMSO. Background information was obtained from various Department of Defense Directives and Department of the Navy Instructions maintained in the Naval Postgraduate School Library, and from prior research work on file with the Defense Logistics Studies Information Exchange.

F. ORGANIZATION

This thesis is divided into five chapters: an introduction chapter, three research chapters, and a final summary chapter. Chapter II provides an overview of the UMMIPS. It describes how military services demands are prioritized and how the Supply Logistics Support Systems should respond to each requisition. Chapter III provides an overview of the RRTMIS program, and how it was the Navy's answer to

the DoD's UMMIPS. The RRTMIS program measures the requisition response time for navy ships. Chapter IV describes the Receipt Take-Up Time portion of the requisition cycle utilizing the RRTMIS program. It provides an analysis Of the Receipt Take-Up Time Report generated by The Fleet Material Support Office and then a summary of all findings. Chapter V, based on the analysis of the Receipt Take-Up Time Report, provides conclusions and recommendations in answer to the original research questions.

II. BACKGROUND

The state of operational readiness for our military forces depends on material availability. The needed material must be available in the correct quantity, at the right place, and at the right time. [REF. 1:p.2] This need often produces competition between and among our military forces for the same resources, in which demand far exceeds supply. Due to the limited availability of such resources, an increasingly complex burden has been placed upon our military logistics system. It is impossible to satisfy all demands affixed to the supply system at the time they are required.

It became apparent that a uniformed policy for the purpose of ranking all military requirements was essential. A method which would help identify and fill critical demands prior to non-critical demands. Such policy must be based on two important criteria. First and most important, it must take into account the overall contribution that the requesting activity's mission bestows towards the accomplishment of national objectives. Two, the policy must be concerned with the importance of the material to the end use activity. In keeping with the above criteria, the policy must ensure that all Department of Defense (DoD) activities have a fair opportunity in satisfying their own demands with the available resources.

The Uniform Material Movement and Issue Priority System (UMMIPS) is such a policy and was implemented by DoD in July 1962. The UMMIPS

is a uniform, multi-service policy, designed to assign priorities to material requirements within our military logistics pipeline during both peacetime and wartime operations [REF. 2:pp.1.2].

A. OVERVIEW OF THE UMMIPS PRIORITIZATION PROCESS

The UMMIPS is a means of prioritizing all demands placed upon the military logistics support system. First, UMMIPS recognizes each military activity's mission and contribution towards meeting national objectives. This is accomplished by assigning each DoD activity a Force/Activity Designator (FAD). Second, UMMIPS concentrates on the importance of the material to the end user through the use of an Urgency of Need Designator (UND). The FAD and UND are then combined to derive a Priority Designator (PD). The PD is a means of informing the logistics support system the criticality of the material to the end user and how quickly it should respond in filling the requisition.

1. Force/Activity Designator (FAD)

A Force/Activity Designator (FAD) is a Roman numeral (I through V) which is assigned to all Force Activities. A Force Activity is defined in OPNAVINST 4614.1F as being:

- 1) A unit, organization, or installation performing a function or mission.
- 2) A body of troops, ships, aircraft, or a combination thereof.
- 3) A function, mission, project, or program including those under Security Assistance Programs.

[REF.3:encl.1.p.2]

The sole purpose of the FAD is to indicate the mission importance of a DoD unit, organization, installation, project, or program to meet national objectives [REF.3:encl.1.p.2]. The FAD is

prescribed by the Secretary of Defense, the Joints Chief of Staff, or a DoD component [REF.3:encl.1.p.2]. It is the personnel occupying these offices which maintain the clearest overall picture of what our national objectives are and what each DoD activity contributes to such objectives.

The end user has no input to the FAD which is attached to his activity, regardless of the essentiality of the material required. Whether the material is necessary to get a ship underway, to repair a weapons system, or to fill a stock requirement has no impact in the FAD assigned. The end user is in no position to make the decision of how much it contributes to meeting national objectives relative to other DoD force Activities.

The criteria for assigning FAD's to the various Force Activities are shown in Appendix A. The lower the Roman Numeral, the more essential that activity's mission contributes towards meeting the overall national objective.

2. Urgency Of Need Designator (UND)

The UND is an alphabetical character (A, B, or C) and is ultimately determined by the requesting activity. The UND's sole function is to indicate the importance of the required material to the end user. Appendix B displays the criteria for assigning the appropriate UND to requisitions for navy afloat units.

The UND is not part of the requisition which leaves the activity when placing a demand upon the logistics support system. The UND is utilized with the FAD in determining the priority for requisitions. The higher the alphabetical character, the more

essential the material is to the activity. To help ensure the use of higher UND's are not abused, the Commanding Officer or officer in charge, is responsible for reviewing all requisitions with a UND of "A" and at least designating in writing a trust worthy person to review UND s of "B" [REF.4:chap.3.p.67]. Without safeguards aiding in the prevention of such abuses, the priority system would not be as effective. Our limited resources would often become exhausted satisfying non-essential requirements prior to essential requirements.

3. Priority Designator (PD)

A Priority Designator (PD) is a two-digit arabic numeral (01 through 12) assigned to each requisition by the end user. The PD is the means in which the logistics support system is notified of the importance for the material to a specific activity. The lower the two-digit number, the more essential the material required. The priority is derived by applying the FAD and UND to a matrix developed by the DoD, shown below.

<u>Force/Activity Designator</u>	<u>Urgency of Need Designator</u>		
	<u>A</u>	<u>B</u>	<u>C</u>
I.....	01	04	09
II	02	05	10
III	03	06	11
IV and V	07	08	12

[REF.3:encl.1.p.7]

The PD plays a vital role in the Total Supply Response Time (date material is requested through the date the material is received and annotated on the activity's inventory records). The higher the priority, the more responsive the logistics system must be in satisfying the demand. The priority affects the time in which the system has to process the requisition, issue the material, transport

the material to the end user, and for the activity to receive and post the material to the inventory records.

The total supply response time should always be less for higher priority requisitions, since they are more critical to the activity's operational performance. Therefore, high priority requisitions are expected to be processed prior to lower priorities. The PD also notifies the transportation system as to how material is to be shipped. If feasible, high priorities will be transported via air while lower priorities via surface. Thus, another reason why the priority system should not be abused, since air is more expensive than surface.

There are basically three groups of priorities: PD group 01 through 03, primarily used for Casualty Repairs (CASREPS) effecting the Force Activity's ability to perform its primary mission: PD 04 through 08, for CASREPS impairing an operation capability of the Force Activity; and 09 through 12, for stock replenishment.

B. UMMIPS REQUISITION TIME STANDARDS

The requisition time standards are goals established by DoD as a means of measuring total supply response time for requisitions submitted into the military logistics pipeline. The requisition cycle is broken down into various segments or phases which the requisition must pass through. Each segment is assigned a separate time standard or goal for completing its part in the requisition cycle. The activity holding the requisition in each segment is responsible for taking appropriate action within their established time constraint. The

total requisition response time can be obtained by summing together the various segments. Appendix C describes the various requisition segments or phases. Appendix D displays the recommended time standards for each segment.

The established requisition time standards serve a dual purpose and is a valuable management tool for planning, if properly utilized. First, the total response time aids the end user in determining when to expect his material to be delivered, providing the material is available to meet his demand. Second, each individual segment can be monitored to determine if any weaknesses exist within the logistics pipeline, assuming the set time standards are realistic goals. The performance data collection system, developed by the System Administrator for the Military Supply and Transportation Evaluation Procedures (MILSTEP), is utilized to evaluate the logistics system's timeliness in meeting UMMIPS time standards [REF.2:encl.2.p.3].

C. SUMMARY

In summary, the UMMIPS was established as a means of prioritizing the total military demands placed against our limited resources. The two key factors involved in the prioritization process are the FAD of the requesting activity and the UND for the material to the end user. The FAD is assigned to a Force Activity by the DoD with the sole purpose of indicating the activity's mission importance in meeting national objectives. The UND is assigned by the end user based on the criticality of the material to its activity.

A Priority Designator is then obtained by applying the FAD and UND to an established DoD table. The PD serves as a means of relaying the material criticality for the end user to the logistics support system. Through the use of a standard time table, the logistics support system is able to determine how rapidly it should respond to each requisition. These time standards are established goals by the DoD as a means of evaluating the requisition response time for all military Force Activities. If the various segments of the requisition cycle are monitored and utilized effectively, weaknesses in the logistics support system can be identified.

III. THE REQUISITION RESPONSE TIME MANAGEMENT INFORMATION SYSTEM

A. BACKGROUND AND PURPOSE

As discussed in Chapter II, the DoD's UMMIPS consisted of goals or time standards for the various segments of the requisition cycle. These time standards are to be utilized so each military service can measure the effectiveness of their own logistics support system. One such system is the Navy's Requisition Response Time Management Information System (RRTMIS). The RRTMIS program falls under the direction of the Fleet Material Support Office and is currently in its second phase of existence.

1. RRTMIS I

The RRTMIS program was approved in March 1974 by RADM Dowd, then Commander of the Naval Supply Systems Command (COMNAVSUP), for the purpose of measuring requisition response time to fleet units. [REF. 5:p.1] The overall effectiveness of the supply support system to afloat units can be evaluated by comparing the total response time obtained through the RRTMIS with the UMMIPS time standards.

The original RRTMIS was a preliminary phase of the program. The main concern in this phase was to get the program implemented and to rectify any faults contained within. The original program was in existence through 1978 with only carriers and Amphibious Assault Ships (LPH's), a group of 21 ships participating [REF. 5:p.1]. Unlike the UMMIPS, the requisition cycle was not yet divided into various

segments. With this shortcoming, the system was limited in its ability to isolate specific problems within the supply support system.

2. RRTMIS II

In April of 1979, a letter from NAVSUP to FMSO approved the RRTMIS II project which increased the number of reporting activities to 72 different ships and Marine Aircraft Groups (MAG's) [REF. 5:p.2]. The new project is basically an expansion of the original system with improvements and corrections to known problems. It also provides management with a more efficient means for measuring the effectiveness of requisition response time.

Similar to the DoD's UMMIPS, the RRTMIS II requisition cycle is divided into various segments for which requisitions must pass through. When an activity has fulfilled its responsibility in responding to a requisition, the completion date for that specific segment is reported to the Fleet Material Support Office (FMSO). The concept of the RRTMIS II is to match shipboard receipt data with issue and shipping data from ashore supply activities to document the complete history of a requisition [REF. 6:p.1]. If managed and utilized effectively, existing weaknesses in the Navy Supply Support System can be isolated and corrective actions initiated towards improving the system. Appendix E displays definitions for the various response time segments.

The RRTMIS II also features a great deal of flexibility in the production of management-oriented summary level reports as well as user-oriented detailed reports [REF. 6:p.1]. Through the use of these reports, the performance of the overall supply support system can be

monitored by top level managers. Lower level managers are also capable of monitoring the performance for each segment of the requisition cycle for which they are held responsible.

B. INPUT

The overall primary function of RRTMIS is to measure the effectiveness of the requisition response time for the Navy Supply System. The RRTMIS accomplishes this feat by producing response time reports for the various segments of the requisition cycle. These reports are the result of processing three types of inputs. One, Shipboard Uniform Automated Data Processing System (SUADPS) receipt information; two, Navy issue transactions; and three, Defense Logistics Agency (DLA) issue transactions [REF. 6:p.1].

The SUADPS Requisition File contains requisitions which have a receipt processed against them since the previous run [REF.6:p.4]. The information is obtained from a requisition tape submitted on a monthly basis by the various SUADPS reporting activities.

The Navy and DLA issue transactions are produced by the MILSTEP systems output files [REF. 6:p.4]. These files contain the issue, processing, and transportation information for all requisitions for which the Navy or DLA had some type of involvement.

C. DATA PROCESSING

All the appropriate data for calculating the response times for the various segments of the requisition cycle are contained in either the SUADPS file, Navy issue transaction file, or the DLA

issue transaction file. The response times are calculated through a matching process using these three files.

The first step in the matching process. is to extract all SUADPS requisitions from the Navy and DLA MILSTEP file based on the Unit Identification Code (UIC) of the SUADPS activity [REF 6:p.6]. After these requisitions have been segregated, they are processed against the SUADPS requisition file based on the document number assigned by the SUADPS reporting activity [REF 6:p.6]. Only those requisitions for material which has been receipted for by the SUADPS activity will produce a match. The Fleet Material Support Office now maintains the complete history for each of the completed requisitions and is able to calculate response times for each segment of the requisition cycle. All unmatched requisitions are retained for matching in subsequent quarters. Definitions for the various time segments are contained in Appendix E.

D. REPORTS

The output obtained from the matching process is maintained in the form of printed reports. RRTMIS has the capability of producing a complete set of response time reports for each segment of the requisition cycle [REF 6:p.8]. It is with these reports that the response times can be compared with the time standards set forth by the UMMIPS to determine the effectiveness of the Navy's Supply Support System.

Detailed reports can be tailored for specific requirements and will be furnished upon request to managers at all levels of

responsibility [REF 6:p.6]. Managers at the lowest supervisory levels are capable of monitoring their appropriate response segments and can compare the performance to their counterparts at other activities. This is an effective means for identifying any specific problems or weaknesses contained within their own area of responsibility. Once a problem is discovered, efforts can be directed towards resolving the deficiency. A list of various reports made available to the users of the RRTMIS program is provided in Appendix F.

IV. RECEIPT TAKE-UP TIME FOR AFLOAT UNITS

A. GENERAL

Chapter II presented an overview of the requisition prioritization process of the DoD's UMMIPS. How requisitions were prioritized according to the Force Activity's mission contribution towards meeting national objectives and the importance of the material to the end user. Time standards were also mentioned for the various segments of the requisition cycle. How these standards are to be utilized as a tool for measuring the effectiveness of the logistics support system for the military services. Chapter III then presented an overview of the Navy's RRTMIS program. How the RRTMIS was designed to measure the effectiveness of the Navy's Supply Support System to afloat activities.

This chapter concentrates on the Receipt Take-Up Time (RTUT) portion of the requisition cycle utilizing the Navy's RRTMIS program. An analysis of the RTUT for afloat units, which are SUADPS capable, will be performed based on the ships input. The RTUT is defined as the difference between the actual date material is received on board (DMROB) and the machine assigned receipt date (MARD) [REF. 6:p.12].

The DMROB is the date posted to the receipt document and theoretically represents the actual date the material is delivered to the end use activity. The MARD represents the date the receipt is posted to the activity's inventory records via computer. According to the UMMIPS time standards the activity's supply department has one day to receive and post issue priority group (IPG) I and II requisitions.

and three days for IPG III requisitions. As will be discussed later in this chapter, these time standards are not being met.

B. DATA UTILIZED

The data utilized in analyzing the RTUT for afloat units was obtained from FMSO in the form of four quarterly printed RTUT Reports. These reports covered an interval of time from April 1986 through March 1987. Only one-fourth of the data for the January through March 1987 report was accepted by FMSO's computer, and therefore, the percentages are assumed to reflect equivalent results as if all data was accepted.

The data is displayed by both the combined and individual IPGs for all activities, for each type activity, and for each individual end use activity (REF. 7). For the purpose of this thesis, the data analyzed only pertains to the combined IPGs for all activities.

C. ANALYSIS OF THE RTUT REPORT

The means of evaluating the RTUT portion of the requisition cycle is the RTUT Report. This report is generated on a quarterly basis by FMSO through the processing of the SUADPS requisition tapes which are provided by the various SUADPS reporting activities. The tapes include both the DMROB and the MARD dates for each requisition which is all the required input necessary for calculating the RTUT.

The RTUT Report consist of five separate tables which can be utilized to measure the efficiency of the supply departments on afloat activities in terms of receiving and posting the material to the inventory records. As a management tool, it can be effectively used by

both the higher level commands as well as the individual ships in monitoring the efficiency in proper receipt procedures.

Each ship maintains the flexibility of utilizing the RTUT Report in evaluating their performance in receipt procedures against the UMMIPS time standards, and more important, through a comparison with the performance of other ships. The UMMIPS time standards for the RTUT portion of the requisition cycle are the same regardless of military service or type activity involved, whether a shore facility or an afloat unit. A comparison with other afloat activities offers a more effective means of evaluating an individual ship's receipt procedures. A ship is able to measure their performance based on the relationship of other like activities operating in a similar type environment.

Through this comparison, a ship sustains the potential to determine if any weaknesses exist in their receipt procedures with respect to the other ships. If a weakness does appear to exist, the appropriate manager can identify a ship with a more efficient operation in an effort of seeking advise to improve his own performance.

Higher level commands, such as Type Commanders, can utilize the report in the same manner. A Type Commander can compare the performance of individual ships, or look at a much broader spectrum by comparing specific ships under his command with ships of other Type Commands.

1. Table I and II

Table I and II of the RTUT Report displays the same data, percentage of blank receipt-on-board dates, only in different format.

A blank receipt date indicates that no date was documented as to when the material was actually received on board the ship. Without the actual date of receipt, a RTUT for that specific requisition cannot be computed. These requisitions are discarded and are not used in further analysis in measuring the efficiency of the RTUT portion of the requisition cycle.

The data from these tables reflect that 31.7 percent of all requisitions contain a blank receipt date. At best, only 68.3 percent of all requisitions are utilized in computing the RTUT for these afloat units.

The percentage of blank receipt dates, for which the requisitions are discarded from the computations, appears to be too high to reflect an accurate picture when evaluating the efficiency in receipt processing. This indicates that there is definitely a problem in receipt procedures aboard ships. The actual date of receipt for a large percentage of materiel delivered to ships is either unknown or not documented.

This problem does not necessarily stem from the lack of knowledge or experience in receipt procedures, but can often be caused by large quantities of material being delivered at the same time. When this happens, the material is often set in a segregated area until sufficient time becomes available for its proper storage. It is at this point when the receipt date is usually documented, if documented at all. If not documented, a blank receipt date for that requisition will be produced.

The data for IPG's I, II, and III, show a 26.5 percent, 36.6 percent, and 26.2 percent blank receipt dates respectively. Issue Priority Group I and II usually indicate a CASREP or material urgently required to repair some type of equipment degrading a mission of the ship. This material is marked as such and should be immediately turned over to the appropriate work center. The high percentages of blank receipt dates for high priority material further indicates a receipt procedural problem. This is not to say that the material is not effectively turnedover, just that the receipt date is not being recorded. Refer to Appendix G for data utilized in the analysis.

2. Table III

Table III of the RTUT Report displays the mean RTUTs for requisitions which are not discarded. Of the four quarters of data analyzed, the average RTUTs ranged from 6.42 days to 7.26 days. These means are much higher than the time standards set forth by the UMMIPS. This also implies that there is either a problem in receipt procedures, that the RTUT standards under the UMMIPS are unrealistic for afloat units, or both.

Data for IPGs I and II show a mean range from 6.56 days to 9.92 days, and from 5.68 days to 6.67 days for IPG III. This is the reverse of what should actually be happening. The RTUTs for higher priority material should be lower due to the nature of the material involved. Another indication that a problem exist in receipt procedures. Refer to Appendix H for data utilized in the analysis.

3. Table IV

Table IV of the RTUT Report displays the ranges for RTUTs. The data shows that the RTUTs range anywhere from one to ninety days, with ninety being the default point for which requisitions are then excluded from the report [REF. 7]. This data further confirms the fact that a receipt problem exist on-board our ships. It is totally unsatisfactory for a receipt to sit unprocessed for a ninety day period, especially high priority requisitions.

Table IV also provides the median RTUTs for total requisitions. It does not break them down by IPG. The median in all four quarters is approximately 3.6 days. This means that at least one-half the requisitions are processed in a time span relatively close to the standards set forth by the UMMIPS. It is the other half of the requisitions which indicate a receipt problem and raises the RTUT average. Refer to Appendix I for data utilized.

4. Table V

Table V of the RTUT Report displays the frequency distribution for all receipts. The data reflects that 82.9 percent of the receipts were processed in ten days or less. 87.9 receipts in thirteen days or less, and 93.7 receipts in twenty-one days or less. This data again substantiates the implications derived from the previous tables, that a receipt problem exist on afloat units, and that the UMMIPS time standards, with regards to the RTUT portion of the requisition cycle, may be unrealistic. Refer to Appendix J for the data utilized.

In revealing the frequency distributions for requisitions processed by each ship, this data would provide a valuable aid in

determining realistic goals strictly for afloat activities. This assumes that each activity puts forth an honest effort towards correct and timely receipt processing procedures.

5. Summary Of Tables

The data from the various tables of the RTUT Report definitely implies that a procedural problem exist in receipt processing aboard navy ships. First, the percentage of requisitions discarded due to blank receipt dates appears to be too high. Although there are no set standards for the number of blank receipt dates which are allowable, 31.7 percent should be considered unacceptable. By eliminating a significant proportion of data from an analysis, the probability of obtaining an accurate prediction is reduced. In the same manner, by discarding such a large percentage of requisitions, it is questionable as to the preciseness of the RTUT Report, in terms of analyzing RTUTs.

Second, receipt processing for the majority of shipboard requisitions exceeds the UMMIPS time standards. Regardless whether the UMMIPS standards are realistic or unrealistic goals, no receipt should remain unprocessed for a period of ninety-days. The probability of losing the requisition increases each day. A lost receipt for stock can only lead to an decrease in the validity of the inventory. There is now material on board for which the ship is unaware. In the public sector's view, it equates to a loss of the tax payers dollars. Depending on the type of material, it can also degrade the state of operational readiness for that activity. Should a demand be placed for that material to prevent a CASREP, the supply department would have to generate an off ship requisition instead of satisfying immediately from

stock. This could prove to be critical to ship operations depending on the material required and the operational situation at hand.

The averages and frequency distribution tables in the RTUT Report implies one of two obvious conclusions. First, that the UMMIPS time standards for the RTUT portion of the requisition cycle are unrealistic and not obtainable, at least for afloat activities. Second, that the UMMIPS time standards are realistic and obtainable, and that a receipt problem does exist on board ships.

Even though the UMMIPS standards appear to be some what unrealistic in terms of afloat activities, many ships are still experiencing receipt procedural problems. The recurrence of the high statistics from quarter to quarter imply that management is not effectively utilizing the RTUT Report. There do not appear to be any new receipt procedures implemented in an effort of improving their performance. Either management is not using the report to monitor their performance; is not knowledgeable in interpreting the report, thus failing to recognize a problem; or does not deem the problem serious enough, thus not requiring improvement.

D. SHORTCOMING IN CALCULATING THE RTUT

The RTUT segment of the requisition cycle is calculated solely from the requisition tape forwarded to FMSO by the SUADPS reporting activities. Both the DMROB and the MARD dates for each completed requisition is contained on the tape. The difference between the two dates is defined as the RTUT for the requisition. The shortcoming pertains to the assignment of the DMROB date. There is no means of

ensuring that the DMROB assigned is in fact the actual date for which the material was received aboard the ship.

When receiving material, three possibilities exist with regards to the DMROB date. First, the DMROB assigned represents the actual date the material was received. In this situation, the receipt was documented correctly and the RTUT for that specific requisition can be calculated accurately. Second, the DMROB date is left blank. In this case a RTUT cannot be computed, the effects for which have been discussed earlier in this chapter. Third, a DMROB is assigned, but is not the actual date in which the material was received.

This incorrect DMROB date will have no affect on the total requisition response time, but will favorably affect the RTUT segment and unfavorably affect the transportation segment. By shortening the time span between the DMROB and the MARD, the RTUT will be reduced, implying that the ship's supply department is more efficient than in actuality. At the same time, the transportation segment will increase by the same amount of time. This makes the transportation system appear less efficient than in actuality.

Even though the tradeoff in times between the two segments has no affect on the total response time, it can create havoc within the transportation system. By maintaining a false impression of their performance, management may misemploy valuable time in an effort to improve an already efficient operation.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

Based on the research and analysis of the RTUTs for Naval ships utilizing the RRTMIS program, this author has reached the following four primary conclusions with regards to the original research questions for which this thesis was written.

1. Navy afloat units do not adhere to the time standards for the RTUT segment set by the DoD UMMIPS. It appears that a two fold problem exist. First, the RTUT portion of the UMMIPS time standards, with regards to afloat units, are unrealistic and not obtainable. Second, there appears to be, to a certain degree, a receipt procedural problem aboard ships. Ships are not always efficient in processing receipts once the materiel is received.
2. The overall UMMIPS should not be changed based on the RTUTs for afloat units. First, the UMMIPS time standards are goals set for all military forces, not just for the Navy. Furthermore, RRTMIS only measures the RTUTs for a fraction of the Navy's total number of activities. To change the UMMIPS time standards based on such a small percentage is not feasible.
3. The RRTMIS is not a reliable measure of effectiveness for RTUT portion of the requisition cycle. First, all input for RTUT calculations are provided by the same activity, which maintains the ability of altering such input to their advantage. Second, a

good percentage of receipts are not included in the RTUT computations due to blank receipt dates. Third, only a fraction of the total Navy ship population is utilizing the RRTMIS program.

4. The RTUT for afloat units can be improved, to some extent, by each Command enforcing receipt procedures to ensure that all receipts are processed in the most efficient manner possible. If part of the problem involves large quantities of materiel being delivered at one time, then change the ordering policy. It may be more feasible to order in lesser quantities on a more often basis.

B. RECOMMENDATIONS

Due to the narrow scope of this thesis, it is recommended that further research be accomplished in the following areas:

1. Conduct an analysis of the RTUT segment for other military and naval activities to determine if the UMMIPS time standards, on a large scale, are obtainable or if they should be changed. Such an analysis will also be beneficial in determining whether or not each type of activity should utilize separate RTUT standards based on their specific operating environment.
2. The feasibility of utilizing bar coding or some other computer identification device for documentation of the DMROB date. This use may have an impact of reducing the number of blank receipt dates and ensuring that the DMROB date is correct, thus, and resulting in a more accurate time charged against both the transportation and RTUT segments.

It is further recommended that the following ideas be considered with regards to the RTUT portion of the requisition cycle:

1. Eliminate the RTUT segment from the UMMIPS Total Requisition Response Time. Receipt processing is an internal responsibility of the end use activity and should be separated from the overall performance of the external logistic support system. Once the materiel is received by the requesting activity, the time clock measuring the effectiveness of the logistic support system should be terminated.
2. Each Type Commander determine and implement RTUT standards for ships under their command, while ensuring that the ships are actively pursuing such standards. Due to the different operating environments, what is determined to be a realistic goal for one type activity may be unrealistic for another type. It is more probable that an activity will put forth an effort in accomplishing a task if the goals are obtainable.

APPENDIX A
CRITERIA FOR ASSIGNING FAD's

A. Designator I will be assigned to:

1. Programs which have been approved for top national priority by the President as set forth in the BRICK-BAT Category of the latest DoD Master Urgency List contained in DoD Instruction S-4410.3

2. Units, projects, or forces, including foreign country forces, which have been specifically designated by the Secretary of Defense on the recommendation of the Joint Chiefs of Staff.

B. Designator II will be assigned to:

1. United States combat ready, and direct combat support forces deployed outside CONUS in specific theaters or areas designated by the Secretary of Defense on the recommendation of the Joint Chiefs of Staff.

2. Those CONUS forces being maintained in a state of combat readiness for immediate (within 24 hours) employment or deployment.

3. DoD Component programs and projects, vital to Defense or national objectives, which are of comparable importance with elements 1 and 2 above.

4. Specified combat ready and direct combat support forces of foreign countries with comparable importance to U.S. forces specified in elements 1 and 2 above.

5. Specific identifiable federal agency programs which are vital to Defense or national objectives and so designated by the Secretary of Defense.

C. Designator III will be assigned to:

1. All other U.S. combat ready and direct combat support forces outside CONUS not included under Designator II.

2. Those CONUS forces being maintained in a state of combat readiness for deployment to combat prior to D+30.

3. DoD Component programs and projects which are of comparable importance with elements 1 and 2 above.

4. Specified combat ready and direct combat support forces of foreign countries with comparable importance to forces specified in elements 1 and 2 above.

5. Specific identifiable federal agency programs designated by the Secretary of Defense.

6. CONUS industrial maintenance and repair activities providing direct logistics support for forces in a state of combat readiness.

D. Designator IV will be assigned to:

1. United States forces being maintained in a state of combat readiness for deployment to combat during the period D+90.

2. DoD Component programs and projects which are of comparable importance with elements specified in 1 above.

3. Specified combat ready and direct combat support forces

of foreign countries with comparable importance to U.S. forces specified in element 1 above.

4. Federal agency programs which contribute to planned improvement of defense or national objectives and are so designated by the Secretary of Defense.

E. Designator V will be assigned to:

1. All other U.S. forces or activities including staff, administrative and base/post supply type activities.

2. Approved programs of DoD Components and federal agencies not otherwise designated.

3. Forces of foreign countries not otherwise designated.

F. In order to facilitate optimum material readiness, the authorized higher Force/Activity Designator may be assumed by a force or activity at a maximum of ninety days prior to its scheduled deployment outside CONUS or its authorized elevation from a lower to higher Force/Activity Designator.

Source: DoD Directive 4410.6, 30 October 1980

APPENDIX B

CRITERIA FOR ASSIGNING UND'S TO SHIPS

A. Designator A will be assigned to:

1. Emergency requirements for weapons, equipment, or materiel for immediate use without which the ship concerned is unable to perform assigned primary operational missions.

2. Materiel required to eliminate a work stoppage on controlling jobs in the repair department of a naval activity that manufactures, modifies, or repairs other ships primary weapons or equipment for which a CASREP report (C-3/C-4) has been submitted. This provision is not applicable when a replacement for a repairable component under repair has been ordered.

3. C-2 CASREPS

(a) Deployed ships.

(b) Non-deployed ships for which UND B requisitions have been initiated and supply status received indicating that materiel will not be available within thirty days, and the commanding officer determines that this delay will cause further degradation of equipment performance resulting in a C-3 or C-4 CASREP. In the case where both the above conditions exist, the requisition already submitted may be upgraded to a UND A.

4. Required to preclude an imminent work stoppage or C-3/C-4 CASREP when undertaking planned maintenance on equipment essential to

primary mission performance when the work stoppage or C-3/C-4 CASREP will occur within 15 days for ships in CONUS or 20 days for ships overseas.

B. Designator B will be assigned to:

1. Items required for immediate end use, the of which is impairing the operational capability of the ship concerned (C-2 CASREP).

2. Items required to effect emergency replacement or repair of auxiliary equipment systems.

3. Replacement of COSAL/AVCAL or other allowance/load list materiel carried in a deployed ship's storeroom which is required for support of mission essential equipment, when the last item has been issued or the quantity remaining on board is less than the minimum replacement unit. For non-deployed forces, the item must have an average quarterly demand of one or more.

4. Required to preclude an anticipated work stoppage or C-2 CASREP when undertaking planned maintenance on essential equipment. The work stoppage is anticipated within 15 days for ships in CONUS or 20 days for ships overseas.

5. Initial order by deployed forces of allowance list materiel due to allowance changes or installation of new equipment.

6. Outfitting and replenishment requisitions for Q COSAL allowed reactor plant components, equipment, repair parts, special tools, and other materiel required to support reactor plant systems.

C. Designator C will be assigned to:

1. Required for scheduled maintenance, manufacture, or replacement of all equipment.

2. Required for replenishment of stock to meet authorized stockage objectives.

3. Required for purposes not specifically covered by any other UND.

Source: OPNAVINST 4614.1F. 15 April 1983

APPENDIX C

DESCRIPTION OF REQUISITION TIME SEGMENTS

A. Requisition Submission. This segment extends from the date of the requisition to the date of receipt by the ultimate wholesale supply source. e.g., appropriate CONUS inventory control point or stock point, which maintains asset availability records for the purpose of filling materiel demands or ordering other supply action.

1. If a request for materiel can be satisfied by the initial retail supply source, no requisition will be entered into the UMMIPS.

B. ICP Availability Determination. This segment extends from the date the requisition is received by the ultimate supply source to the date that the materiel release/issue instruction is transmitted to the depot/storage site.

C. Depot/Storage Site Processing. This segment extends from the date that the materiel release or issue instruction is transmitted to the depot/storage site until the date that materiel is made available to the transportation officer.

D. Depot Hold for Transportation. This segment extends from the date the materiel is made available to the transportation

officer until the date the materiel is released to a transportation carrier.

E. CONUS Intransit. This segment extends from the date the materiel is released to a transportation carrier to the date of receipt by the CONUS requisitioning installation or by the Port of Embarkation in the case of overseas requisitions.

F. Port of Embarkation Hold. This segment extends from date of receipt of the materiel by a CONUS Port of Embarkation until the date the materiel is released to an overseas transportation carrier.

G. Overseas Shipment/Delivery. This segment extends from the date of receipt of the materiel by an overseas transportation carrier until the date that materiel is delivered to the overseas requisitioning installation.

H. Receipt take-Up by Requisitioner. This segment extends from the date of receipt of the materiel at destination until the date that the materiel is recorded on the requisitioner inventory records.

Source: DoD Directive 4410.6. 30 October 1980

APPENDIX D
UMMIPS TIME STANDARDS

TIME SEGMENT	TIME STANDARDS (CALENDER DAYS)			
	FOR PRIORITY DESIGNATORS:			
	01-03	04-08	09-15	09-15
A. Requisition Submission	1	1	2	For use when shipments are consolidated at origin into SEAVAN containers
B. Passing Action	1	1	2	
C. Availability Determination	1	1	3	
D. Depot/Storage Site Processing	1	2	8	23
E. Transportation Hold and CONUS Intransit to CONUS Requisitioner. Canada. or to Point of embarkation	3	6	13	13
F. Overseas Shipment/Delivery				
1. To Alaska. Hawaii. South America. Caribbean. or North Atlantic	4	4	38	23
2. To Northern Europe. Mediterranean. or Africa	4	4	43	28
3. To Western Pacific	5	5	53	38
4. To Middle East	4	4	67	52
G. Receipt Take-Up BY Requisitioner	1	1	3	3

Source: OPNAVINST 4614.1F. 15 April 1983

APPENDIX E

DEFINITION FOR TIME SEGMENTS

- A. Submission Time. Date Received at Point of Entry (POE) minus Requisition Date or Document Date.
- B. Passing Action Time. Date Received at the Issuing Stock Point (ISP) minus the Date Received at the POE.
- C. Stock Point Processing Time. Date shipped minus Date Received at the ISP.
- D. Storage Site Processing Time. The Date Offered minus the Supply Action Date.
- E. DLA Processing Time. Date Offered minus Date Received at ISP.
- F. Transportation Hold Time. Date Shipped minus Date Offered.
- G. Navv Storage Site Processing and Hold Time. Date Shipped minus Supply Action Date.
- H. Transportation Time. Date Material Received On-Board (DMROB) minus Date Shipped.
- I. Receipt Take-Up Time (RTUT). Receipt Date minus DMROB.
- J. Total Requisition Response Time. Receipt Date minus Document Date.

Source: FMSO's RPTMIS Users Guide, June 1986

APPENDIX F
RRTMIS REPORTS

1. Submission Time Report (SUBM). Measures the time segment from the document date to the date requisition is received at the POE.
2. Referral Processing Time Report (RPTR). Measures the time segment from the date a requisition is received at a POE to the date the requisition is received at the ISP.
3. Navv Stock Point Processing Time Report (SPPT). Measures the time segment from the date a requisition is received at the ISP to the date the material is shipped.
4. Defense Depot Processing Time Report (DDPT). Pertains to DLA items and measures the time segment from the date of the Material Release Order (MRO) to the date the material is shipped.
5. Transportation Hold Time Report (HOLD). Measures the time segment from the date the material is offered for shipment to the date the material is shipped.
6. Transportation Time Report for Areas (TRNA). Measures the time segment from the date the material is shipped to the date the material is received. The date the material is received is either the DMROB, if available, or the MARD.

7. Reduced Sample Transportation Time Report for Areas (REDA).

Measures the time segment from the date the material is shipped to the date the material is received. The date the material is received is the DMROB.

8. Transportation Time Report for Fleets (TRNB). Measures the time segment from the date the material is shipped to the date the material is received. The date the material is received is either the DMROB, if available, or the MARD.

9. Reduced Sample Transportation Time Reports for Fleets (REDB).

Measures the time segment from the date the material is shipped to the date the material is received. The date the material received is the DMROB.

10. Transportation Time Report for Consignees (TRNC).

Measures the time segment from the date the material is shipped to the date the material is received. The date the material is received is the DMROB, if available, or the MARD.

11. Reduced Sampling Transportation Time Report for Consignees (REDC).

Measures the time segment from the date the material is shipped to the date the material is received. The date the material is received is the DMROB.

12. Transportation Time Summary Report (TTSR).

The statistical data shown pertains to the transportation time for four calendar quarters.

broken down by IPG, Transportation Mode, and ISP for various Fleet and Mag groupings.

13. Receipt Take-Up Time Report (RTUT). Shows the percentage of completed requisitions with a non-blank DMROB date and provides a statistical analysis of the RTUT which is defined as the difference between the actual DMROB and the MARD.

14. Total Requisition Response Time Report for Areas (TRPTA). Measures the total time from requisition document date to the date the material is received. The date the material is received is the MARD.

15. Total Requisition Response Time Report for Fleets (TRPTB). Measures the total time from requisition document date to the date the material is received. The date the material is received is the MARD.

Source: FMSO's RRTMIS Users Guide, June 1986.

APPENDIX G

PERCENTAGE OF BLANK RECEIPT ON BOARD DATES

	- QUARTERS -				
	<u>Second 86</u>	<u>Third 86</u>	<u>Forth 86</u>	<u>First 87</u>	<u>Total</u>
<u>ALL IPG's</u>					
Valid Receipts	588512	682675	252227	98832	1622246
Blank Receipts	206337	200513	79732	27084	513666
Percent Blank	35.1	29.4	31.6	27.4	31.7
 <u>IPG I</u>					
Valid Receipts	49137	51607	19120	7292	127156
Blank Receipts	15384	12414	4223	1679	33700
Percent Blank	31.3	24.1	22.1	23.0	26.5
 <u>IPG II</u>					
Valid Receipts	293414	357097	146330	55869	852710
Blank Receipts	117315	120127	57257	17083	311782
Percent Blank	40.0	33.6	39.1	30.6	36.6
 <u>IPG III</u>					
Valid Receipts	245961	273971	86777	35671	642380
Blank Receipts	73638	67972	18252	8322	168184
Percent Blank	29.9	24.8	21.0	23.3	26.2

Source: FMSO's RTUT Reports

APPENDIX H
MEAN RECEIPT TAKE-UP TIMES

	- Quarters -			
	<u>Second 86</u>	<u>Third 86</u>	<u>Forth 86</u>	<u>First 87</u>
<u>ALL IPGs</u>				
Non-Blank Receipt Dates	376616	475397	170353	70431
Mean Days	7.26	7.16	7.09	6.42
<u>IPG I</u>				
Non-Blank Receipt Dates	32637	38119	14404	5395
Mean Days	9.07	9.92	9.44	9.14
<u>IPG II</u>				
Non-Blank Receipt Dates	172842	233352	88176	38128
Mean Days	7.51	7.34	7.12	6.56
<u>IPG III</u>				
Non-Blank Receipt Dates	171137	203926	67773	26908
Mean Days	6.67	6.43	6.55	5.68

Source: FMSO's RTUT Reports

APPENDIX I

RANGE OF RTUTs

	- QUARTERS -			
	<u>Second 86</u>	<u>Third 86</u>	<u>Forth 86</u>	<u>First 87</u>
<u>ALL IPGs</u>				
Non-Blank				
Receipt Dates	376616	475397	170353	70431
Min Take-Up Time	1	1	1	1
Median Take-Up				
Time	3.8	3.5	3.6	3.5
Max Take-Up Time	90	90	90	90
<u>IPG I</u>				
Non-Blank				
Receipt Dates	32637	38119	14404	5395
Min Take-Up Time	1	1	1	1
Max Take-Up Time	90	90	90	89
<u>IPG II</u>				
Non-Blank				
Receipt Dates	172842	233352	88176	38128
Min Take-Up Time	1	1	1	1
Max Take-Up Time	90	90	90	90
<u>IPG III</u>				
Non-Blank				
Receipt Dates	171137	203926	67773	26908
Min Take-Up Time	1	1	1	1
Max Take-Up Time	90	90	90	90

Source: FMSO's RTUT Reports

APPENDIX J
FREQUENCY DISTRIBUTION OF RTUTs

	- QUARTERS -			
	<u>Second 86</u>	<u>Third 86</u>	<u>Forth 86</u>	<u>First 87</u>
Non-Blank Receipt Dates	376616	475397	170353	70431
1-2 Days	128010	184060	64011	26915
3-4 Days	74550	91887	30597	14593
5-7 Days	73334	81667	28668	13027
8-10 Days	35081	39404	14354	6036
11-13 Days	19587	21615	10211	3090
14-21 Days	21020	26556	12014	3521
22-42 Days	16889	17714	7507	1872
43-90 Days	8145	12494	2991	1377

Source: FMSO's RTUT Reports

APPENDIX K

GLOSSARY

AVCAL	Aviation Consolidated Allowance List
CASREP	Casualty Repair
CONUS	Continental United States
COSAL	Coordinated Shipboard Allowance List
DLA	Defense Logistics Agency
DMROB	Date Material Received On Board
DoD	Department of Defense
FAD	Force Activity Designator
FMSO	Fleet Material Support Office
ICP	Inventory Control Point
IPG	Issue Priority Group
ISP	Inventory Stock Point
MAG	Marine Air Group
MARD	Machine Assigned Receipt Date
MILSTEP	Military Supply and Transportation Evaluation Procedures
NAVSUP	Naval Supply Systems Command
PD	Priority Designator
POE	Port OF Embarkation
RRTMIS	Requisition Response Time Management Information System
RTUT	Receipt Take-Up Time
SUADPS	Shipboard Uniform Automated Data Processing System

UIC	Unit Identification Code
UMMIPS	Uniform Material Movement and Issue Priority System
UND	Urgency of Need Designator

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